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EXAMINER	
TRAIL, ALLYSON NEEL	
ART UNIT	**PAPER NUMBER**
2876	

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/811,969	HOMEWOOD ET AL.	
	Examiner	Art Unit	
	Allyson N. Trail	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *89-340* is/are pending in the application.

4a) Of the above claim(s) *295-340* is/are withdrawn from consideration.

5)☒ Claim(s) *140-221 and 232-294* is/are allowed.

6)☒ Claim(s) *89,91-111,114-121,123-126 and 128-139* is/are rejected.

7)☒ Claim(s) *90,112,113,122 and 127* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 August 2004* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *05-2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 89, 91-97, 101, 107, 117, 120, 121, 123-126, 133-137, and 139 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in view of Mandel et al (5,752,697).

Vadura et al teaches the following in regards to claims 89, 91, 120, 121, and 133:

"An electronic voting system has a voting administrative module connected to a plurality of voting modules connected via a network. A voter initiates the voting process by inserting a voting key into a voting key reader of a voting module. The voter then makes voting selections, which include casting votes, on a touch screen display of the voting module. After the voter is finished casting votes, a voter verifiable paper ballot is printed and an electronic ballot is saved on the electronic voting system. The voter can review the paper ballot. If the voter is not satisfied with the voting selections reflected on the paper ballot, then the paper ballot and the electronic ballot may be spoiled and the voter given a new voting key to use to re-cast the votes on the electronic voting system." (Abstract).

Vadura et al teaches the following in regards to claim 92:

"The voting module includes a processor for analyzing voting information and one or more electronic storage devices for storing voting information." (Paragraph 0007).

When the voter is finished with the paper ballet, it is deposited (hidden) in the ballot box at the polling site. (Paragraph 0020).

In regards to claim 93, Vadura et al teaches the printer spoiling the printed paper if the voter is not satisfied with the voting selection. It is additionally taught that the display displays the ballot having election choices to receive voter reselections. (Abstract).

Vadura et al teaches the following in regards to claims 94-97, 101, 107, and 137:

"The electronic voting system also includes at least one printer that has a third network interface for connectivity to the network of voting modules, or it includes a printer that is directly connected to each voting module." (Paragraph 0007).

Vadura et al teaches the following in regards to claim 117:

"The printer 24 comprises any device capable of storing information in a fixed form, such as a paper print-out. For example, the printer 24 may be, the Lexmark Z55 Ink Jet printer utilized for printing, for example, tally reports and paper ballots." (Paragraph 0036).

Vadura et al teaches the following in regards to claim 134:

"Once a voter is satisfied with the selections, the voter presses a CAST YOUR BALLOT button in a step 552 to officially cast the ballot. After the voter has pressed the CAST YOUR BALLOT button, the actions listed below occur, but not necessarily in the order presented below." (Paragraph 0081).

In regards to claims 135 and 136, Vadura et al teaches the selection panel including a touch screen that is integrated with a display screen of the display. The selection panel is configured to receive a ballot. The voting screen includes a protective cover. (Abstract).

In regards to claim 139, Vadura et al teaches the printer and the voting machine including integral contacts such that when the printer is attached to the voting machine, at least one of power up and data communication between the voting machine and printer is initiated. (Paragraph 0009).

Vadura et al's teachings discussed above fail to specifically teach a temper resistant holder for the recording medium contained in the printer and further fail to teach the tamper resistant container including a serial number.

Mandel et al teaches the following in regards to claims 123, 125, and 126:

The printer includes an internal paper path for printing with sheet jam clearance capability and a system for signaling a sheet jam, and at least one openable printer access door providing access to the paper path for jam clearances; a print job security improvement system with an automatic locking system for electronically locking the printer access door and an access door on the mailboxing system during printing of security sensitive print jobs to prevent access to the internal printer paper path. (Abstract).

In regards to claim 124, Mandel et al teaches the container needing an access code in order to be opened.

In view of Mandel et al's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to include a security feature or tamper resistant holder, including a serial number for the paper used in the printing device. As discussed above, voter authenticity is extremely important and including paper with a security feature helps ensure that validity of the paper ballet. One would be motivated to include a tamper resistant holder for the printer paper in order to ensure that the paper in the printer is that of the security type paper. By including a lock, only authorized personnel will be able to add paper to the printer. This will make certain that the correct paper is in the printer.

3. Claim 100 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in combination with Mandel et al (5,752,697) and in further view of Gauss (4,880,202).

Vadura et al's teachings in combination with the teachings of Mandel et al are discussed above. The combination however fails to specifically teach attaching the printer to the controller in a slotting manner.

In regards to claim 100 Gauss illustrates in figure 1, fasteners 24, which may be screws, bolts, clips, clamps or other items for holding or fastening the computer printer 10 in place. Although Gauss does not specifically teach using a slotting method, Gauss teaches that item could be used to fasten the printer in place.

In view of Gauss' teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to attach the printer taught by Vadura et al, using any manner of fastening as is taught by Gauss. Although no specific fastener is taught by Vadura et al, one would be motivated to use a slotting method in order to securely fasten the printer to the voting controller.

4. Claims 222, 223, 225-228, 230, and 231 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in view of Spitzer (5,299,436).

Vadura et al's teachings discussed above fail to teach detecting the printer being removed from the voting machine and also to include a locking device.

Spitzer teaches the following in regards to claims 222, 223, 225-228, 230, and 231:

"Electronic equipment, such as printers, computers, facsimile machines and the like, are used widely in offices and other organizations, such as schools and hospitals. Such valuable equipment, can be easily stolen from the premises, since they are portable and are very accessible. Thus, various security devices have been employed to fasten releasably a unit to be protected, to a supporting surface, such as a table top or desk." (Col. 1, lines 21-28).

Figure 1 shows the security feature including the electronic locking system.

In view of Spitzer's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to include a detector

for sensing the removal of the printer and a locking mechanism to ensure that the printer cannot be removed. Vadura et al teaches the importance of the printer in the method of voting. One would be motivated to include both the sensor and the locking device as taught by Spitzer in order to guarantee that the printer remain connected to the voting machine taught by Vadura et al.

5. Claim 229 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in combination with Spitzer (5,299,436) and in further view of Gauss (4,880,202).

Vadura et al's teachings in combination with the teachings of Spitzer are discussed above. The combination however fails to specifically teach attaching the printer to the controller with screws.

In regards to claim 229 Gauss illustrates in figure 1, fasteners 24, which may be screws, bolts, clips, clamps or other items for holding or fastening the computer printer 10 in place.

In view of Gauss' teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to attach the printer taught by Vadura et al, using screws or other fasteners as is taught by Gauss. Although no specific fastener is taught by Vadura et al, one would be motivated to use screws in order to securely fasten the printer to the voting controller.

6. Claims 98 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in combination with Mandel et al (5,752,697) and in further view of Spitzer (5,299,436).

Vadura et al's teachings in combination with the teachings of Mandel et al are discussed. The combination fails to teach detecting the printer being removed from the voting machine and also to include a locking device.

Spitzer teaches the following in regards to claims 98 and 99:

"Electronic equipment, such as printers, computers, facsimile machines and the like, are used widely in offices and other organizations, such as schools and hospitals. Such valuable equipment, can be easily stolen from the premises, since they are portable and are very accessible. Thus, various security devices have been employed to fasten releasably a unit to be protected, to a supporting surface, such as a table top or desk." (Col. 1, lines 21-28).

Figure 1 shows the security feature including the electronic locking system.

In view of Spitzer's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to include a detector for sensing the removal of the printer and a locking mechanism to ensure that the printer cannot be removed. Vadura et al teaches the importance of the printer in the method of voting. One would be motivated to include both the sensor and the locking device as taught by Spitzer in order to guarantee that the printer remain connected to the voting machine taught by Vadura et al.

7. Claims 102-106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in combination with Mandel et al (5,752,697) and in further view of Kenji (2003/0030657) and Caputo et al (2004/0051368).

Vadura et al's teachings in combination with the teachings of Mandel et al are discussed above. The combination fails to specifically teach the voting machine containing an RFID reading and reading an RFID tag from the printer to confirm an attachment of a correct printer to the machine.

Kenji teaches the following in regards to claims 102-106:

"With reference to FIG. 7, where a PIN code is not received from the printer 3 within a prescribed period of time (NO in S111), the personal computer 1 displays on the display 106 an error message indicating that the image data output destination is not an authorized printer (S112) and sends to the management server 2 a print result report indicating that printing did not end normally (S113), whereupon the image distribution process is ended. On the other hand, where a PIN code is received from the printer 3 within the prescribed period of time (YES in S11), it is verified whether or not the received PIN code matches the PIN code received in step S107 together with the image data output permission notification. Where they do not match (NO in S114), the personal computer 1 displays an error message indicating that the image data output destination is not an authorized printer (S112) and sends a print result report to the effect that printing did not end normally to the management server 2 (S113), whereupon the image distribution process is ended. Consequently, output of image data to an apparatus that is not an authorized printer can be prevented, thereby preventing improper use of the output image data." (Paragraph 0040).

In view of Kenji's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to include a method of

detecting that an authorized printer is connected to the correct computer. As discussed throughout, the verification of the correct paper ballet is extremely important in order to ensure accurate voting. One would be motivated to detect that an authorized printer be connected to the correct voting machine in order to make certain that the designated security paper be used for the printing of the paper ballet.

The combination of teachings of Vandura et al, Mandel (5,752,697), and Kenji however fail to specifically use RFID tags to validate the use of an authorized printer.

Caputo et al teaches using RFID tags to verify that the correct patient to receive a medication. (Paragraph 0051).

In view of Caputo et al's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to use an RFID tag to detect that an authorized printer is connected to the correct computer. As discussed above, Kenji teaches using a PIN code to verify that the printer is correct. One would be motivated to use an RFID tag in place of a PIN code because RFID tags can detect the presences of the printer automatically instead of manually entering a PIN code. This would make the process of detection faster and more accurate.

8. Claims 108-111, 114, 115, and 130-132 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in combination with Mandel et al (5,752,697) and in further view of Nomura et al (2002/0171681).

Vadura et al's teachings in combination with the teachings of Mandel et al are discussed above. The combination fails to specifically teach the touch screen being partially transparent and further fails to teach the touch screen being an LCD screen.

Nomura et al teaches the following in regards to claims 108-111, 114, 115, 130-132:

"LCD 12 is a touch-panel LCD (an LCD having a transparent touch screen) capable of graphic display and includes a transparent touch screen (touch keys) which allows for designation of various conditions and selection of desired display content, based on the information displayed on the display in a flip-through manner." (Paragraph 0055).

In view of Nomura et al's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to include a partially transparent LCD touch screen as taught Nomura et al in the voting system taught by Vadura et al. Vadura et al teaches both a touch screen and viewing the printed paper ballet in order to prevent errors in voting. One would be motivated to use an LCD screen because LCD screens are easy to manufacture and work well in a touch screen format. Additionally, one would be motivated to include a partially transparent screen in order to view other components of the Vadura et al's voting system. For example, by making the screen transparent, the voter is able to clearly see the printer, which prints the selected votes for comparison.

9. Claim 116 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in combination with Mandel et al (5,752,697) and in further view of Kobayashi et al (6,232,993).

Vadura et al's teachings in combination with the teachings of Mandel et al are discussed above. The combination fails to specifically teach the printer being a reel-to-reel type paper feeding system.

Kobayashi et al teaches the following in regards to claim 116:

Figure 26 shows a printer 10 comprising a paper reel 13, a ribbon feed reel 14, and a ribbon winding reel 15 with a printing paper 16.

In view of Kobayashi et al's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to use a reel-to-reel type printer for the printing paper ballets disclosed in Vadura et al. Reel-to-reed type printers are well known in the art. One would be motivated to use this particular type of printer because the paper is feed carefully and precisely through the feeder thereby printing accurately.

10. Claims 118, 119, and 138 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in combination with Mandel et al (5,752,697) and in further view of Brown (2003/0047596).

Vadura et al's teachings in combination with the teachings of Mandel et al are discussed above. The combination fails to specifically teach using privacy shield between the voting machines.

Brown teaches the following in regards to claims 118, 119, and 138:

"Legs, 26, and carrying rings, 27, may be employed to improve the transportability of the voting machine. It would be realized to a skilled artisan that curtains, shields, or other privacy features may be incorporated without departing from the scope of the present invention." (Paragraph 0026).

In view of Brown's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to include in Vadua et al's voting system, privacy shields between the voting machines as taught by Brown. Although Vadura et al does not specifically teach privacy shields it is common knowledge that each voting machine is separated with a shield from one another. One would be motivated to privacy shields so that voters do not feels as though others can see his or her selection.

11. Claims 128 and 129 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in combination with Mandel et al (5,752,697) and in further view of Harris (5,871,615).

Vadura et al's teachings in combination with the teachings of Mandel et al are discussed above. The combination fails to specifically teach the recording medium of ht printer including an ink die security feature to ensure that the printed audit is authentic.

Harris teaches the following in regards to claims 128 and 129:

Harris's invention is related to a method for the manufacture of security paper (title).

Harris further teaches, printing a pattern on paper. The pattern facilitates further enhancement of the security of the paper, for example, by the application

of a fluorescent ink to the surface of the paper carrying the tactile pattern. The high points of detail on the tactile pattern can be passed into contact with an ink roller carrying the fluorescent ink, leaving the low points unaffected. When the ink is dried and the paper is viewed under UV light, the outline of the image can be clearly seen. This additional security feature can be applied in a cost-effective way on the papermachine after the paper has been dried, at any convenient location prior to reel-up. Visible or other types of ink can be applied instead of or in addition to the fluorescent ink. (Col. 3, line 58 – Col. 4, line 4).

In view of Harris's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to include a security feature, such as the feature taught by Harris on the printed ballot taught by Vadura et al. The importance of voter authenticity during voting is extraordinarily important. Including a security feature on the paper ballet would ensure authenticity of the voter's selections. One would be motivated to include the security feature in order separate fraudulent paper ballets with authentic ones.

12. Claim 224 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vadura et al (2004/0195323) in combination Spitzer (5,299,436) and in further view of Kenji (2003/0030657) and Caputo et al (2004/0051368).

Vadura et al's teachings in combination with the teachings of Spitzer are discussed above. The combination fails to specifically teach the voting machine containing an RFID reading and reading an RFID tag from the printer to confirm an attachment of a correct printer to the machine.

Kenji teaches the following in regards to claim 224:

"With reference to FIG. 7, where a PIN code is not received from the printer 3 within a prescribed period of time (NO in S111), the personal computer 1 displays on the display 106 an error message indicating that the image data output destination is not an authorized printer (S112) and sends to the management server 2 a print result report indicating that printing did not end normally (S113), whereupon the image distribution process is ended. On the other hand, where a PIN code is received from the printer 3 within the prescribed period of time (YES in S11), it is verified whether or not the received PIN code matches the PIN code received in step S107 together with the image data output permission notification. Where they do not match (NO in S114), the personal computer 1 displays an error message indicating that the image data output destination is not an authorized printer (S112) and sends a print result report to the effect that printing did not end normally to the management server 2 (S113), whereupon the image distribution process is ended. Consequently, output of image data to an apparatus that is not an authorized printer can be prevented, thereby preventing improper use of the output image data." (Paragraph 0040).

In view of Kenji's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to include a method of detecting that an authorized printer is connected to the correct computer. As discussed throughout, the verification of the correct paper ballet is extremely important in order to ensure accurate voting. One would be motivated to detect that an authorized printer be connected to the correct voting machine in order to

make certain that the designated security paper be used for the printing of the paper ballet.

The combination of teachings of Vandura et al and Kenji however fail to specifically use RFID tags to validate the use of an authorized printer.

Caputo et al teaches using RFID tags to verify that the correct patient to receive a medication. (Paragraph 0051).

In view of Caputo et al's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to use an RFID tag to detect that an authorized printer is connected to the correct computer. As discussed above, Kenji teaches using a PIN code to verify that the printer is correct. One would be motivated to use an RFID tag in place of a PIN code because RFID tags can detect the presences of the printer automatically instead of manually entering a PIN code. This would make the process of detection faster and more accurate.

Allowable Subject Matter

13. Claims 90, 112, 113, 122, and 127, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims.

14. Claim 140-221 and 232-294 are allowed.

The following is an examiner's for allowance: Vadura et al teaches a voting machine, which includes a display, a printer with a tamper resistant container, and a printed audit trail that is viewable by the voter, the above identified prior art of record, taken alone, or in combination with any other prior

art, fails to teach or fairly suggest the specific features of claims 90, 112, 113, 122, 127, 140-221, and 232-294 of the present claimed invention. The voting machine in prior art fails to include the tamper resistant container including a transparent window used to allow the voter to view the printed audit trail and restrict physical access to the printed audit trail. Prior art further fails to teach the voting machine comprising a controller that causes the display screen to be segmentally made transparent such that at least one portion of the printed audit trail that should be viewed by the voter can be viewed through the display screen. Additionally not taught is a controller that causes the display screen being opaque and causes the display screen to be transparent to allow the voter to view the printed audit trail on the print medium through the display screen and the causes the display screen to be opaque so that a next voter cannot view the print medium through the display screen. The voting machine includes an auto-load mechanism that loads/unloads canisters and wherein the printer includes at least one bi-directional drive motor that is controlled by the controller to randomize a printed position of the audit trail is also not taught in prior art. The above limitations are not disclosed in prior art and moreover, one of ordinary skill in the art would not have been motivated to come to the claimed invention.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Allyson N. Trail* whose telephone number is (571) 272-2406. The examiner can normally be reached between the hours of 7:30AM to 4:00PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571) 272-2398. The fax phone number for this Group is (571) 273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**allyson.trail@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Allyson N. Trail
Patent Examiner
Art Unit 2876
December 20, 2005